

Date: Wednesday, 28/01/2009 4:59:45 PM
 User: Julie Dawson

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services		Drawing Name	: BLADE		
Job Number	: 45320		Part Number	: D2741		
Estimate Number	: 10327		Drawing Number	: D2741 REV C		
P.O. Number	:		Project Number	: N/A		
This Issue	28/01/2009	S.O. No. :	Drawing Revision	: C		
Prsht Rev.	: NC		Material	:		
First Issue	/ /	Type : MACHINED PARTS	Due Date	10/02/2009	Qty:	40
Previous Run	: 44031		Um:	Each		
Written By	:					
Checked & Approved By	: <u>JUL 09.01.29</u>					
Comment	: Est Rev: D 00.11.15 Removed P/O turning - in house processEC Est Rev: E 06-03-20 As Per Rev C JLM Est Rev: F 06.04.20 Added grinding after heat treating EC					

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description:
1.0	M4130NB0500X03000	4130 Bar 0.500 x 3.00
Comment: Qty.: 1.2118 f(s)/Unit Total: 48.4722 f(s) 4130 BAR 0.5 x 3.0"		<i>M110336 X 20</i>
Material: 4130 steel bar 0.50" x 3.00"		Batch: <i>M106274 X 20</i>
2.0	BAND SAW	BAND SAW
Comment: BAND SAW Cut blanks 13.850" long +0.063" -0.000"		<i>ml 09/01/31</i>
3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
Comment: HAAS CNC VERTICAL MACHINING #1 1-Machine per folio FA108		<i>ml 09/01/31</i>

ml = 09/02/06 / 86 09/04/09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Customer: CU-DAR001 Dart Helicopters Services	Drawing Name: BLADE
Job Number: 45320	Part Number: D2741
Job Number:	
Seq. #:	Machine Or Operation:
4.0	QC2
	INSPECT PARTS AS THEY COME OFF MACHINE
	mmf 09/02/06
	Comment: INSPECT PARTS AS THEY COME OFF MACHINE
5.0	QC8
	SECOND CHECK
	J.L. 09/02/10
	Comment: SECOND CHECK
6.0	SMALL FAB 1
	SMALL & MEDIUM FAB RESOURCE 1
	Comment: SMALL & MEDIUM FAB RESOURCE 1
	1-Deburr
	2-Bend per Dwg D2741
7.0	QC5
	INSPECT WORK TO CURRENT STEP
	Log 09/02/18 (40)
	Comment: INSPECT WORK TO CURRENT STEP
8.0	OUTSIDE SERV.30
	OUTSIDE SERVICES-MACH
	Comment: Sub-Contracting PURCHASING
	Issue P/O: 9215
	Harden material as per Dwg D2741
	Min. Ultimate Tensile Strength = 152 ksi (34-40 HRC)
	Min. Yield Tensile Strength = 141 ksi
	Test report or Certification required
9.0	PACKAGING 1
	PACKAGING RESOURCE #1
	Comment: PACKAGING RESOURCE #1
	Receive and Inspect for transit damage
	Ensure Test report or Certification attached
10.0	QC5
	INSPECT WORK TO CURRENT STEP
	Log 09/03/18 (40)
	Comment: INSPECT WORK TO CURRENT STEP
11.0	SMALL FAB 1
	SMALL & MEDIUM FAB RESOURCE 1
	Comment: SMALL & MEDIUM FAB RESOURCE 1
	1-Pass in deburring machine
	2-Grind off edges

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 28/01/2009 4:59:46 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services		Drawing Name: BLADE
Job Number: 45320		Part Number: D2741
Job Number:		
Seq. #:	Machine Or Operation:	Description :
12.0	POWDER COATING 	POWDER COATING HJ 09-03-23 (X40) x wash off oil x 
<p>Comment: POWDER COATING Powder Coat White Gloss (Ref: 4.3.5.2) as per QSI 005 4.3</p> <p>START TIME: 14:35 OVEN TEMPERATURE: 400° FINISH TIME: 15:05 (mp1) x 09/03/24</p>		
13.0	QC3 	INSPECT POWDER COAT/CHEMICAL CONVERSION 
<p>Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION AS 09-03-25 (X40)</p>		
14.0	PACKAGING 1 	PACKAGING RESOURCE #1 
<p>Comment: PACKAGING RESOURCE #1 Identify and Stock Location: ST 466 C 09/03/25 (40)</p>		
15.0	QC21 	FINAL INSPECTION/W/O RELEASE  09/03/25 (40)
<p>Comment: FINAL INSPECTION/W/O RELEASE</p>		
Job Completion 		MF 09-03-25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	W5320
Description: Blade	Part Number:	D2741
Inspection Dwg: D2741	Rev: C	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Measured by:	<u>MMF / 88</u>	Audited by:	<u>JL</u>	Prototype Approval:	N/A
Date:	<u>09/03/18</u>	Date:	<u>09/03/18</u>	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	03.12.22	New Issue	KJ/RF	
B	06.03.09	Revised per Rev. C	KJ/JLM	<i>[Signature]</i>



Metcor Inc.

Rapport d'inspection

Order	Load
146058	1

Customer 215
DART AEROSPACE
1270 ABERDEEN
HAWKESBURY ON K8A 1K7

Shipped To:
DART AEROSPACE
1270 ABERDEEN
HAWKESBURY ON K8A 1K7

Customer PO / PO du Client	Customer Shipper No.	Material Type / Material	Mat'l Heat Code	Lot Number
8215		4130		

PROCESSING SPECIFICATIONS

SEL HARDEN
HARDEN AND TEMPER
SAE AMS 2759/1 REV.D

Requirement	Specified	Tests Performed	Test Results
HARDNESS	34 - 40 HRC	40	38 - 40 HRC
TENSILE (KSI)	152 - 182 KSI		171 - 182 KSI

Quantity	Weight	Part Number / Part Description
40	138	D2741 BLADE B45320 1 PAL=2 B.C

COMMENTS

INSPECTOR:

and 2

DATE: 2009-03-15

METCOR INC.

Recu de Livraison

560 BOUL. ARTHUR-SAUVÉ
ST-EUSTACHE, QC J7R 5A8
Tel: 450-473-1884 / Fax: 450-491-5498

Order	Shipper	Shipping Seq.
146058	1	30204

Shipped Complete

Customer 215

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

Shipped To:

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

Purchase Order Number	Customer Shipper No.	Material Type	Order Date	Carrier
8215		4130	2009/2/19	EPIC
Quantity	Part No. / Part Name / Part Description			Pounds
40	D2741 BLADE B45320 1 PAL=2 B.C			138,

Container Type	# Of Containers	Container Comments
	1	1 PAL=2 B.C

PACKING	
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Quantity Shipped: 40
Pounds Shipped: 138,00
Quantity Remaining: 0
Pounds Remaining: 0,00

Quantity Shipped:	40
Pounds Shipped:	138,00

Signature:

Date:

Shipped ON: 2009/03/16



METCOR INC.

560 BOUL. ARTHUR-SAUVÉ
ST-EUSTACHE, QC, J7R 5A8

Tel: 450-473-1884 / Fax: 450-491-5498

Certification

Order	Load
146058	1

Customer 215
DART AEROSPACE
1270 ABERDEEN
HAWKESBURY
ON K6A 1K7

Shipped To:
DART AEROSPACE
1270 ABERDEEN

HAWKESBURY ON K6A 1K7

Customer PO / PO du Client	Customer Shipper No.	Material Type / Material	Mat'l Heat Code	Lot Number
8215		4130		

PROCESSING SPECIFICATIONS

SEL HARDEN
HARDEN AND TEMPER
SAE AMS 2759/1 REV.D

Requirement	Specified	Tests Performed	Test Results
HARDNESS	34 - 40 HRC	40	38 - 40 HRC
TENSILE (KSI)	152 - 182 KSI		171 - 182 KSI

*S
02/03/18*

Quantity	Weight	Part Number / Part Description
40	138	D2741 BLADE B45320 1 PAL=2 B.C

Operation	Specified Temp	Specified Soak Time	Atmosphere	Carbon Potential	Q-Media Q-Temp	Furnace# Load #	Start Date	Time In	Time Out	Date Complete
1.00 CONT. INIT.	LAVAGE		si nécessaire							
2.00 PREPARATION	COMPTAGE									
3.00 PREHEAT 1	1000	1:00 1:30	air			133	02-25-09	16:20	17:35	02-25-09
4.00 SEL HARDE	1575	0:40	SEL		BRINE	107	02-25-09	17:35	18:35	02-25-09
5.00 WASH	150	0:30	soap			150	02-25-09	18:55	19:30	02-25-09
6.00 SNAP TEMPF	400	2:00	air			639	02-25-09	19:30	21:35	02-25-09
7.00 DIST INSP										
8.00 TEMPER	875 +/-10°F	4 hrs	air			610	03-04-09	19:35	1:05	03-05-09

TCOR INC.
BOUL. ARTHUR-SAUVÉ
L-EUSTACHE, QC, J7R 5A8
Tel: 450-473-1884 / Fax: 450-491-5498

Certification

Order	Load
146058	1

Customer 215
DART AEROSPACE
1270 ABERDEEN
HAWKESBURY
ON K6A 1K7

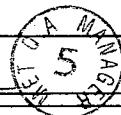
Shipped To:
DART AEROSPACE
1270 ABERDEEN
HAWKESBURY
ON K6A 1K7

Operation	Specified Temp	Specified Soak Time	Atmosphere	Carbon Potential	Q-Media Q-Temp	Furnace# Load #	Start Date	Time In	Time Out	Date Complete
9.00 TEMPER 2	900	4 hrs	air			611	03-13-09	1:00	5:55	03-13-09
10.00 HARDN INS										
11.00 SANDBLAS			Sablage							
12.00 HUILAGE			huile							
13.00 FINAL INSP										03-15-09

COMMENTS

APPROVED BY:

DATE: 2009-03-16



We certify that all the information on this report is exact and in accordance with the order requirements. / Nous certifions que toute l'information comprise sur ce rapport est exacte et conforme aux requis du client.